CLAIMS

The invention claimed is:

1.   A computer-implemented method for correcting text, comprising the steps of:

5   receiving a text selection comprising a plurality of text components derived from different input sources;

at least one of the text components comprising a stochastic text component derived from a stochastic input source or a series of stochastic input sources;

10   receiving a command to display alternatives for the text selection;

parsing the text selection into the text components;

retrieving the stochastic model for the stochastic text component from its associated stochastic input source or series of input sources;

combining the stochastic model with other text components to produce a 15   list of alternatives for the text selection; and

displaying the list of alternatives for the text selection on a display device.

2.   The method of claim 1, further comprising the steps of:

receiving a user command selecting one of the displayed alternatives; and

20   replacing the text selection with the selected alternative.

3.   The method of claim 1, further comprising the steps of:

receiving an edit to the text selection;

producing a revised list of alternatives for the edited text selection; and

25   displaying the revised list of alternatives for the edited text selection.

4.   The method of claim 1, further comprising the steps of:

receiving an edit to one of the stochastic text components;

retrieving a revised stochastic model for the edited stochastic text component from its associated stochastic input source or series of input sources;

5   combining the revised stochastic model with another stochastic model associated with the text selection to produce a revised list of alternatives for the edited text selection; and

displaying the revised list of alternatives for the edited text selection.

10   5.   The method of claim 1, wherein the text selection comprises a portion of text in a file within an application selected from the group consisting of a word processor, a spreadsheet, a browser, an electronic mail program, a music transcription program, a CAD program, a presentation program, and an operating system.

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6.   The method of claim 1, wherein the step of displaying the alternatives for the text selection further comprises the steps of:

ranking the alternatives for the text selection in probability order; and

displaying the alternatives in their rank order on the display device.

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7.   The method of claim 6, wherein the step of displaying the alternatives in their rank order further comprises the steps of:

selecting a pre-determined number of highest ranked alternatives; and

displaying the selected alternatives in their rank order on the display

25   device.

8.   The method of claim 1, wherein the text selection comprises a plurality of stochastic text components and the step of combining the stochastic models further comprises the steps of:

combining the stochastic models for each stochastic text component to produce an interim list of alternatives for the text selection;

providing the interim list of alternatives to a natural language model;

receiving a revised list of alternatives for the text selection from the natural language model, the revised list of alternatives comprising a reevaluation of the interim list of alternatives based on natural language principles applied by the natural language model to the text selection as a whole; and

displaying the revised list of alternatives as the list of alternatives for the text selection.

9.   The method of claim 8, wherein the revised list of alternatives also comprises additional alternatives formed by the natural language model that are not found in the interim list of alternatives provided to the natural language model.

10.   The method of claim 8, further comprising the step of providing the stochastic model retrieved for one or more stochastic text components to a natural language model for reevaluation based on natural language principles.

11.   The method of claim 8, further comprising the step of providing the stochastic model for each stochastic text component to the natural language model for use in creating the revised list of alternatives.

12.   The method of claim 1, wherein the text selection comprises a plurality of stochastic text components and the stochastic models for the text components comprise lattices, and wherein the step of combining the stochastic models to produce a list of alternatives for the text selection further comprises

5   the steps of:

concatenating the lattices into a metalattice that includes information about any text components that are derived from a non-stochastic source; and

producing the list of alternatives for the text selection from the metalattice.

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13.   The method of claim 1, wherein the text selection comprises a plurality of stochastic text components and one of the stochastic models comprises an "n-best" candidate list and another stochastic model comprises a lattice, and wherein the step of combining the stochastic models to produce a

15   list of alternatives for the text selection further comprises the steps of:

creating an "n-best" candidate list corresponding to the lattice; and

producing the list of alternatives for the text selection by combining the "n-best" candidate lists for the text components.

20   14.   The method of claim 1, wherein the step of retrieving a stochastic model for a text component originating from a stochastic input source further comprises the steps:

determining if the text component is derived from stochastic input sources configured in series;

25   if the text component is derived from stochastic input sources configured in series, deriving a series stochastic model by combining together a stochastic model from each stochastic input source in the series;

retrieving the series stochastic model as the stochastic model for the text component.

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15. The method of claim 1, wherein the step of retrieving the stochastic model for the stochastic text component from its associated stochastic input source or series of input sources comprises the steps of:

5 receiving user input into a first stochastic input source in a series of stochastic input sources;

selecting a stochastic result comprising a plurality of alternatives produced by the first stochastic input source;

producing a plurality of stochastic results for a second stochastic input

10 source in the series by using each alternative of the stochastic result produced by the first stochastic input source as input into the second stochastic input source to produce a stochastic result for the second stochastic input source;

if any stochastic result for the second stochastic input source does not comprise an "n-best" alternatives list, converting that stochastic result to an "n-

15 best" alternatives list;

combining the stochastic results for the second stochastic input source to create a totalized alternatives list for the second stochastic input source.

16. The method of claim 15, wherein the step of combining the

20 plurality of stochastic results for the second stochastic input source to create the totalized alternatives list for the second stochastic input source further comprises the steps of:

creating a single entry in the totalized alternatives list for each unique alternative appearing in the plurality of stochastic results for the second

25 stochastic input source;

calculating a probability for each alternative in the totalized alternatives list by summing all probabilities assigned to that alternative in the plurality of stochastic results for the second stochastic input source; and

assigning each calculated probability to its associated alternative.

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17. A computer-readable medium having computer-executable instructions for performing the method of claim 1.

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18. A computer adapted to perform the method of claim 1.

19. A computer-readable medium having computer-executable instructions for performing the method of claim 16.

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20. A computer adapted to perform the method of claim 16.

21.   A computer-implemented method for correcting text, comprising the steps of:

receiving a text selection from a user;

receiving a command to display alternatives for the text selection;

5   submitting the text selection to a correction scope model to determine if a scope of correction should be adjusted;

receiving from the correction scope model a text unit that includes the text selection and at least one adjacent word;

producing a list of alternatives for the text unit; and

10   displaying the list of alternatives for the text unit on a display device.

22.   The method of claim 21, further comprising the steps of:

receiving a user command selecting one of the displayed alternatives; and

replacing the text unit with the selected alternative.

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23.   The method of claim 21, wherein the adjacent word is incorrect because of a related error that caused a word within the text selection to be incorrect.

20   24.   The method of claim 21, wherein the correction scope model includes criteria selected from the group consisting of a natural language model, a model of likely errors, an acoustic model, a handwriting model, and a vision-based model.

25. The method of claim 21, wherein the step of producing a list of alternatives for the text unit further comprises the steps of:

parsing the text unit into text components derived from different input sources;

5   determining if one of the text components comprises a stochastic text component;

if the one of the text components comprises the stochastic text component, retrieving a stochastic model for the stochastic text component; and

combining the stochastic model with other text components to produce a
10   list of alternatives for the text unit.

26. A computer-readable medium having computer-executable instructions for performing the method of claim 21.

15   27. A computer adapted to perform the method of claim 25.